

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

54. (Currently Amended) A dendritic polymer of generation n comprising:

- a central core § of valence m;
- optionally, generation chains branching around the core;
- an intermediate chain at the end of each generation chain that is present, or at the end of each bond around the core, where appropriate; and
- a terminal group at the end of each intermediate chain,

wherein said terminal group is represented by the formula:

-(A1)<[A2-P(=O)(OX)<sub>2</sub>]<sub>2</sub> (T)

wherein

-A1< represents the radical -CR< or -Heteroatom< ;

the radicals A2, which are identical or different, each independently of the other represents a single bond or a linear or branched hydrocarbon chain having from 1 to 6 chain members, each of said chain members optionally being selected from a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl;

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical;

X represents an -Alkyl or -Aryl radical, -H or /M<sup>+</sup>, where M is a cation,

m represents an integer greater than or equal to 1;

n represents an integer from 0 to 12; and

< represents two bonds situated on A1,

wherein the generation chains, which are identical or different, are represented by the formula:

-A-B-C(D)=N-N(E)-(P(=G))< (C1)

wherein:

A represents an oxygen, sulfur or phosphorus atom or a radical -NR-;

B represents a radical -Aryl-, -Heteroaryl-, or -Alkyl-, each of which is optionally substituted by a halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

C represents a carbon atom,

D and E, which are identical or different, each independently of the other represents a hydrogen atom, or an -Alkyl, -OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

G represents a sulfur, oxygen, nitrogen, selenium or tellurium atom or a radical =NR;

N represents a nitrogen atom;

P represents a phosphorus atom; and

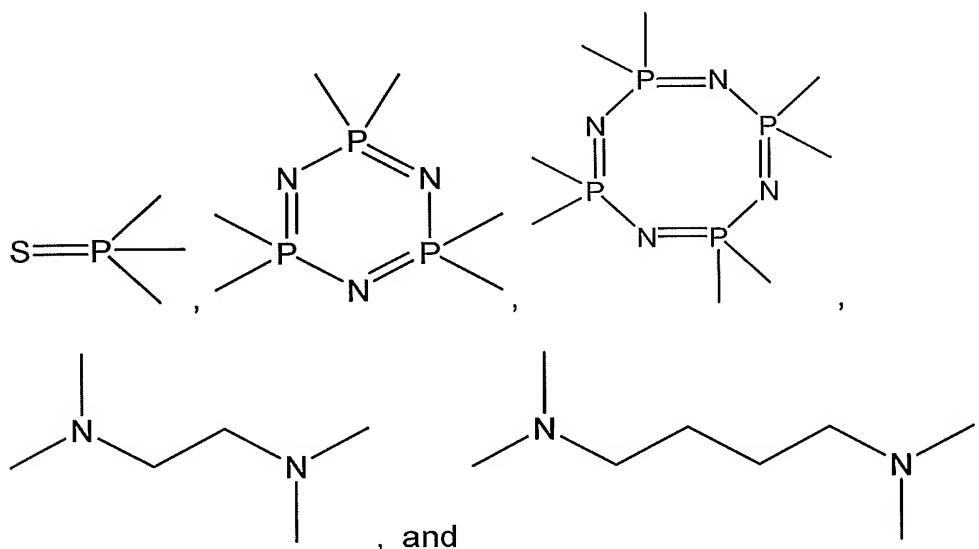
R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

55. (Previously Presented) A dendritic polymer according to claim 54, having a structure of the DAB, PAMAM or PMMH type.

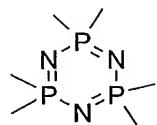
56. (Previously Presented) A dendritic polymer according to claim 54, wherein A1 represents the radical -CH< or -N<.

57. (Previously Presented) A dendritic polymer according to claim 54, wherein A2 represents -Me-.

58. (Previously Presented) A dendritic polymer according to claim 54, wherein the central core § is selected from the group consisting of:



59. (Previously Presented) A dendritic polymer according to claim 54, wherein the central core § has the formula:



60. (Previously Presented) A dendritic polymer according to claim 54, wherein m represents an integer from 1 to 8.

61. (Previously Presented) A dendritic polymer according to claim 54, wherein m is selected from 3, 4 and 6.

62. (Previously Presented) A dendritic polymer according to claim 54, wherein n is from 0 to 3.

63. (Previously Presented) A dendritic polymer according to claim 54, wherein the generation chains are selected from linear and branched hydrocarbon chains having from 1 to 12 chain members and optionally having one or more double or triple bonds, each of said chain members optionally being selected from a heteroatom, an Aryl radical, a Heteroaryl radical, >C=O, and >C=NR, each chain member being optionally substituted by one or more substituents selected from the group consisting of-Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl,

wherein

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

64. (Cancelled)

65. (Currently Amended) A dendritic polymer according to claim [[64]] 54,  
wherein in formula C1 A represents an oxygen atom.

66. (Currently Amended) A dendritic polymer according to claim [[64]] 54,  
wherein B represents an optionally substituted phenyl radical.

67. (Currently Amended) A dendritic polymers according to claim [[64]] 54,  
wherein D represents a hydrogen atom.

68. (Currently Amended) A dendritic polymer according to claim [[64]] 54,  
wherein E represents an -Alkyl radical.

69. (Currently Amended) A dendritic polymer according to claim [[64]] 54,  
wherein G represents a sulfur atom.

70. (Currently Amended) A dendritic polymer according to claim [[54]] 108,  
wherein the generation chains are represented by the formula:

-A'-(C=O)-N(R)-B'-N< (C1')

wherein

A' and B' each independently of the other represents an -Alkyl, -Alkenyl, or -  
Alkynyl radical, each of which is optionally substituted by one or more substituents

selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl; and

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

71. (Previously Presented) A dendritic polymer according to claim 70, wherein A' and B' each independently of the other represents a radical -Alkyl-.

72. (Currently Amended) A dendritic polymer according to claim [[54]] 108, wherein the generation chains are represented by the formula:

-A"-N< (C1")

wherein

A" represents an -Alkyl, -Alkenyl, or -Alkynyl radical, each of which is optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl,

wherein R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

73. (Previously Presented) A dendritic polymer according to claim 72, wherein A" represents an optionally substituted radical -Alkyl-.

74. (Previously Presented) A dendritic polymer according to claim 54, wherein the intermediate chains are selected from linear and branched hydrocarbon chains having from 1 to 12 chain members and optionally having one or more double

or triple bonds, each of said chain members optionally being selected from a heteroatom, an Aryl radical, a Heteroaryl radical,  $>\text{C}=\text{O}$ , and  $>\text{C}=\text{NR}$ , each chain member being optionally substituted by one or more substituents selected from - Alkyl, -Hal, - $\text{NO}_2$ , - $\text{NRR}'$ , -CN, - $\text{CF}_3$ , -OH, -OAlkyl, -Aryl, and -Aralkyl, wherein R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

75. (Cancelled)

76. (Currently Amended) A dendritic polymer according to claim [[75]] 108, wherein J represents an oxygen atom.

77. (Currently Amended) A dendritic polymer according to claim [[75]] 108, wherein K represents an optionally substituted -Phenyl- radical.

78. (Currently Amended) A dendritic polymer according to claim [[75]] 108, wherein L represents a radical  $-(\text{Alk})_a-$  or the radical  $-\text{C}(\text{D})=\text{N}-\text{N}(\text{E})-(\text{Alk})_a-$ , where D and E, which are identical or different, each independently of the other represent a hydrogen atom, or an -Alkyl, --OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a halogen atom or by a - $\text{NO}_2$ , - $\text{NRR}'$ , -CN, - $\text{CF}_3$ , -OH, -Alkyl, -Aryl, or -Aralkyl radical.

79. (Previously Presented) A dendritic polymer according to claim 54, wherein the intermediate chains are represented by formula

-A'-(C=O)-N(R)-B'- (C2')

wherein A' and B' each independently of the other represents an -Alkyl, -Alkenyl, or -Alkynyl radical, each of which is optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl; and

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

80. (Previously Presented) A dendritic polymer according to claim 54, wherein the intermediate chains are represented by formula

-A''- (C2'')

wherein

A'' represents an -Alkyl, -Alkenyl, or -Alkynyl radical, each of which is optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl; and

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

81. (Previously Presented) A dendritic polymer according to claim 54, wherein M<sup>+</sup> represents a cation of an element of group IA, IIA, IIB or IIIA of the periodic table or a cation of a nitrogen-containing base.

82. (Previously Presented) A dendritic polymer according to claim 54, wherein M is selected from the atoms sodium and potassium.

83. (Previously Presented) A dendritic polymer according to claim 54, wherein the generation chains are identical.

84. (Currently Amended) A dendritic polymer according to claim 54, wherein the generation chains and the intermediate chains, which may be identical or different, are respectively represented by the formula (C1) [[or]] and (C2):

-A-B-C(D)=N-N(E)-(P(=G))< (C1)

-J-K-L- (C2)

wherein:

A represents an oxygen, sulfur or phosphorus atom or a radical -NR-;

B represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or by a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

C represents a carbon atom,

D and E, which are identical or different, each independently of the other represents a hydrogen atom, or an -Alkyl, -OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

G represents a sulfur, oxygen, nitrogen, selenium or tellurium atom or a radical =NR;

N represents a nitrogen atom;

P represents a phosphorus atom;

J represents an oxygen atom, a sulfur atom or a radical -NR-;

K represents a radical -Aryl-, -Heteroaryl-, or -Alkyl-, each of which is optionally substituted by a Halogen atom or by a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

L represents a linear or branched hydrocarbon chain having from 1 to 6 chain members and optionally having one or more double or triple bonds, each of said chain members optionally being a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl,

wherein R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

85. (Previously Presented) A dendritic polymer according to claim 54, which is represented by the following formula (I-1i):

§-{{A-B-C(D)=N-N(E)-(P(=G))<}<sup>n</sup>[J-K-(Alk)<sub>a</sub>-N<[A2-P(=O)(OX)<sub>2</sub>]<sub>2</sub>]<sub>m</sub>} (I-1i)

in which:

§ represents a central core;

{{A-B-C(D)=N-N(E)-(P(=G))<}<sup>n</sup> represents generation chains;

J-K-(Alk)<sub>a</sub>- represents an intermediate chain';

A represents an oxygen, sulfur or phosphorus atom or a radical -NR-;

B represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

C represents a carbon atom,

D and E, which are identical or different, each independently of the other represents a hydrogen atom, or an -Alkyl, -OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

G represents a sulfur, oxygen, nitrogen, selenium or tellurium atom or a radical =NR;

N represents a nitrogen atom;

P represents a phosphorus atom;

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical;

J represents an oxygen atom, a sulfur atom or a radical -NR-;

K represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

X represents an -alkyl or -Aryl radical, -H or /M<sup>+</sup>, where M is a cation, the radicals A<sub>2</sub>, which are identical or different, each independently of the other represents a single bond or a linear or branched hydrocarbon chain having from 1 to 6 chain members, each of said chain members optionally being selected from a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl;

m represents an integer greater than or equal to 1;

n represents an integer from 0 to 12;

{<sup>n</sup>} denotes the branched structure of the generation n chains of said dendritic polymer, and

a represents 0 or 1.

86. (Previously Presented) A dendritic polymer according to claim 54, which is represented by the following formula (I-1ii):

§-{{A-B-C(D)=N-N(E)-(P(=G))<}<sup>n</sup>[J-K-C(D)=N-N(E)-(Alk)<sub>a</sub>-CH<[A2-P(=O)(OX)<sub>2</sub>]<sub>2</sub>]<sub>2</sub>}<sub>m</sub> (I-1ii)

in which:

§ represents a central core;

{A-B-C(D)=N-N(E)-(P(=G))<}<sup>n</sup> represents generation chains;

J-K-C(D)=N-N(E)-(Alk)<sub>a</sub>- represents an intermediate chain;

A represents an oxygen, sulfur or phosphorus atom or a radical -NR-;

B represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

C represents a carbon atom,

D and E, which are identical or different, each independently of the other represents a hydrogen atom, or an -Alkyl, -OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

G represents a sulfur, oxygen, nitrogen, selenium or tellurium atom or a radical =NR;

N represents a nitrogen atom;

P represents a phosphorus atom;

J represents an oxygen atom, a sulfur atom or a radical -NR-;

K represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or by a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

X represents an Alkyl or-Aryl radical, -H or /M<sup>+</sup>, where M is a cation, the radicals A2, which are identical or different, each independently of the other represents a single bond or a linear or branched hydrocarbon chain having from 1 to 6 chain members, each of said chain members optionally being selected from a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl;

m represents an integer greater than or equal to 1;

n represents an integer from 0 to 12;

{<sup>n</sup>} denotes the branched structure of the generation n chains of said dendritic polymer, and

a represents 0 or 1.

87. (Cancelled)

88. (Cancelled)

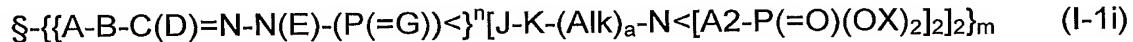
89. (Withdrawn) A method for preparing a dendritic polymer according to claim 54, comprising:

(i) reacting the corresponding dendritic polymer having a terminal function -CHO, -CH=NR, -NH<sub>2</sub> or -P(=G)Cl<sub>2</sub> with a corresponding compound having one or two functionalities -PO<sub>3</sub>X<sub>2</sub>;

(ii) optionally followed, when X represents H or M, by a step which comprises converting the dendritic polymer obtained in (i) having a -PO<sub>3</sub>Me<sub>2</sub> termination into the corresponding dendritic polymer having an -A1<[A2-P(=O)(OH)<sub>2</sub>]<sub>2</sub> termination,

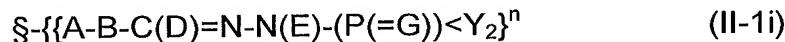
(iii) optionally followed, when X represents M, by a step which comprises converting the dendritic polymer obtained in (ii) having an -A1<[A2-P(=O)(OH)<sub>2</sub>]<sub>2</sub> termination into the salt of the corresponding dendritic polymer having an -A1<[A2-P(=O)(OM)<sub>2</sub>]<sub>2</sub> termination.

90. (Withdrawn) A method for preparing a dendritic polymer according to claim 89, wherein, when the dendritic polymer according to the invention is represented by the formula (I-1i)



in which §, A, B, C, D, E, G, N, P, J, K, A2, Alk, X, a, m, n, and < have the meanings defined above,

step (i) comprises reacting with the corresponding dendritic polymer of the same generation n of the formula



wherein Y represents -Cl;

a compound of formula H-J-K-(Alk)<sub>a</sub>-N<[A2-P(=O)(OX)<sub>2</sub>]<sub>2</sub> (III).

91. (Withdrawn) A method according to claim 90, wherein the reaction is carried out in solution in a polar aprotic solvent, in the presence of an organic or inorganic base, at a temperature of from -80°C to 100°C.

92. (Cancelled)

93. (Cancelled)

94. (Withdrawn) A method according to claim 89, wherein, when the dendritic polymer according to the invention is represented by formula (I-1ii)

$\S-\{A-B-C(D)=N-N(E)-(P(=G))<\}^n[J-K-C(D)=N-N(E)-(Alk)_a-CH<[A2-P(=O)(OX)_2]_2]_2\}_m$  (I-1ii)

in which:

$\S$ , A, B, C, D, E, G, N, P, J, K, L, X, A2, m, n, and a have the meanings defined above,

step (i) comprises reacting with the corresponding dendritic polymer of formula

$\S-\{A-B-C(D)=N-N(E)-(P(=G))<\}^n-[J-K-L']_2\}_m$  (II-1ii)

wherein L' represents a radical -CHO ;

a compound of formula  $(Alk')_a-CH-[A2-P(=O)(OX)_2]$  (VI)

wherein Alk' corresponding to Alk defined above in formula (I-1ii) represents a radical Alkenyl, and X has the meaning defined above, in the presence of a compound of formula

$H_3C-NH-NH_2$  (VII).

95. (Withdrawn) A method according to claim 94, wherein the reaction is carried out in a polar aprotic solvent medium, by addition of the compounds (VI) and (VII) to the dendritic polymer (II-1ii) at a temperature of from -80°C to 100°C.

96. (Withdrawn) A method for preparing a dendritic polymer according to claim 89, wherein step (ii) is carried out:

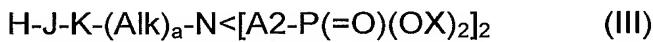
- by the action of a trimethylsilane halide,
- followed by the action of anhydrous MeOH, which is added to the reaction mixture.

97. (Withdrawn) A method according to claim 96, wherein the procedure is carried out in a polar aprotic organic solvent by addition of the trimethylsilane halide while keeping the reaction mixture at a temperature of from -80°C to 50°C.

98. (Withdrawn) A method for preparing a dendritic polymer according to claim 89, wherein in step (iii) a salt of a compound according to the invention is obtained starting from a compound according to the invention having a terminal group in which X represents a hydrogen atom.

99. (Withdrawn) A method for preparing a dendritic polymer according to claim 98, wherein the procedure is carried out in solution, in a suitable polar protic or aprotic solvent, in the presence of an organic or inorganic base, depending on the salt that is desired.

100. (Withdrawn) A compound of formula (III):



in which

X represents an -Alkyl, -C(=O), or -Aryl radical, H or M<sup>+</sup>, wherein M<sup>+</sup> is a cation;

J represents an oxygen atom, a sulfur atom or a radical -NR-;

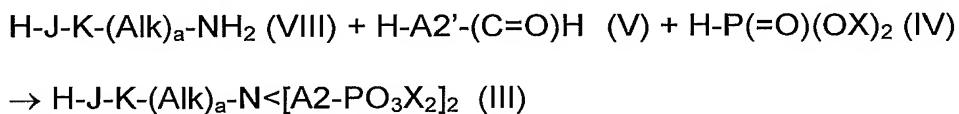
K represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

the radicals A2, which are identical or different, each independently of the other represents a single bond or a linear or branched hydrocarbon chain having from 1 to 6 chain members, each of said chain members optionally being selected from a heteroatom, preferably nitrogen, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl;

-Alk- represents an alkyl radical; and

a represents 0 or 1.

101. (Withdrawn) A method for preparing a compound of formula (III) according to claim 100, comprising the following step:



wherein, in formula (V), -A2'- is a radical corresponding to A2.

102. (Withdrawn) A method according to claim 101, wherein the procedure is carried out by addition of the compounds (VIII) and (IV), and of the compound (V), at a temperature of from -5 to 25°C.

103. (Withdrawn) A method for treating or being in contact with surfaces comprising using a dendritic polymer according to claim 54.

104. (Withdrawn) A method according to claim 103, wherein said surfaces are metal, silica-based or oxide-based.

105. (Withdrawn) A method according to claim 103, wherein said dendritic polymer is used as an additive in a composition that is to be in contact with or to treat said surface.

106. (Withdrawn) A method according to claim 103, wherein said dendritic polymer is used as an anti-corrosive agent, a lubricating agent, a scale preventer or as a flame retardant.

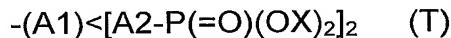
107. (Cancelled)

108. (New) A dendritic polymer of generation n comprising:

- a central core § of valence m;

- optionally, generation chains branching around the core;
- an intermediate chain at the end of each generation chain that is present, or at the end of each bond around the core, where appropriate; and
- a terminal group at the end of each intermediate chain,

wherein said terminal group is represented by the formula:



wherein

$-A1 <$  represents the radical  $-CR <$  or  $-Heteroatom <$ ;

the radicals  $A2$ , which are identical or different, each independently of the other represents a single bond or a linear or branched hydrocarbon chain having from 1 to 6 chain members, each of said chain members optionally being selected from a heteroatom, each chain member being optionally substituted by one or more substituents selected from  $-Alkyl$ ,  $-Hal$ ,  $-NO_2$ ,  $-NRR'$ ,  $-CN$ ,  $-CF_3$ ,  $-OH$ ,  $-OAlkyl$ ,  $-Aryl$ , and  $-Aralkyl$ ;

$R$  and  $R'$ , which are identical or different, each independently of the other represents a hydrogen atom or an  $-Alkyl$ ,  $-Aryl$ , or  $-Aralkyl$  radical;

$X$  represents an  $-Alkyl$  or  $-Aryl$  radical,  $-H$  or  $/M^+$ , where  $M$  is a cation,

$m$  represents an integer greater than or equal to 1;

$n$  represents an integer from 0 to 12; and

$<$  represents two bonds situated on  $A1$ ,

wherein the intermediate chains are represented by formula:



wherein

$J$  represents an oxygen atom, a sulfur atom or a radical  $-NR-$ ;

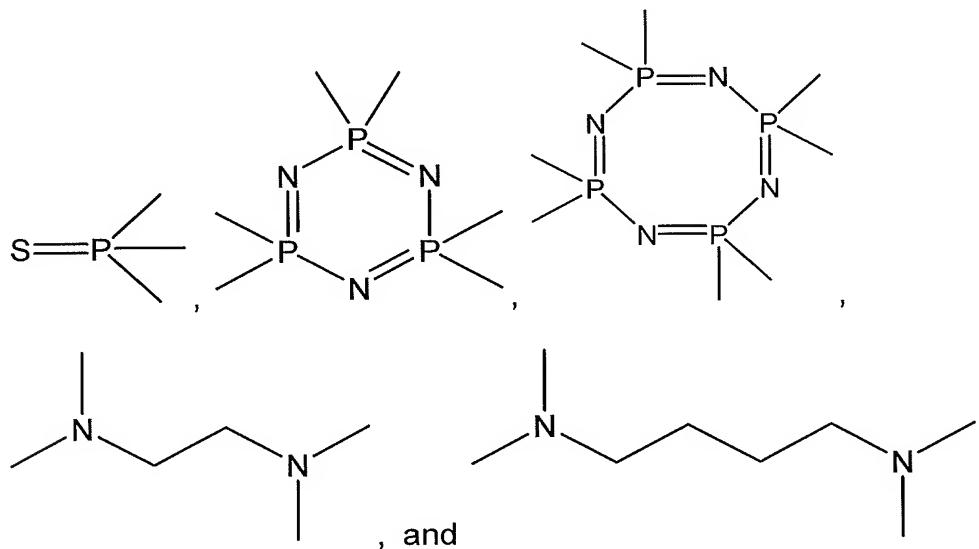
K represents an -Aryl-, -C(=O), -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

L represents a linear or branched hydrocarbon chain having from 1 to 6 chain members and optionally having one or more double or triple bonds, each of said chain members optionally being a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl,

wherein R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical

109. (New) A dendritic polymer according to claim 108, wherein A2 represents -Me-.

110. (New) A dendritic polymer according to claim 108, wherein the central core § is selected from the group consisting of:



111. (New) A dendritic polymer according to claim 108, wherein the central core § has the formula:



112. (New) A dendritic polymer according to claim 108, wherein m represents an integer from 1 to 8.

113. (New) A dendritic polymer according to claim 108, wherein m is selected from 3, 4 and 6.

114. (New) A dendritic polymer according to claim 108, wherein n is from 0 to 3.

115. (New) A dendritic polymer according to claim 108, wherein the generation chains are selected from linear and branched hydrocarbon chains having from 1 to 12 chain members and optionally having one or more double or triple bonds, each of said chain members optionally being selected from a heteroatom, an Aryl radical, a Heteroaryl radical, >C=O, and >C=NR, each chain member being optionally substituted by one or more substituents selected from the group consisting of-Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl,

wherein

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

116. (New) A dendritic polymer according to claim 108, wherein M<sup>+</sup> represents a cation of an element of group IA, IIA, IIB or IIIA of the periodic table or a cation of a nitrogen-containing base.

117. (New) A dendritic polymer according to claim 108, wherein M is selected from the atoms sodium and potassium.

118. (New) A dendritic polymer according to claim 108, wherein the generation chains are identical.

119. (New) A dendritic polymer according to claim 108, wherein the generation chains and intermediate chains are respectively represented by the formula (C1) and (C2):

-A-B-C(D)=N-N(E)-(P(=G))< (C1)

-J-K-L- (C2)

wherein:

A represents an oxygen, sulfur or phosphorus atom or a radical -NR-;

B represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or by a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

C represents a carbon atom,  
D and E, which are identical or different, each independently of the other represents a hydrogen atom, or an -Alkyl, -OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

G represents a sulfur, oxygen, nitrogen, selenium or tellurium atom or a radical =NR;

N represents a nitrogen atom;

P represents a phosphorus atom;

J represents an oxygen atom, a sulfur atom or a radical -NR-;

K represents a radical -Aryl-, -Heteroaryl-, or -Alkyl-, each of which is optionally substituted by a Halogen atom or by a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

L represents a linear or branched hydrocarbon chain having from 1 to 6 chain members and optionally having one or more double or triple bonds, each of said chain members optionally being a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl,

wherein R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical.

120. (New) A dendritic polymer according to claim 108, which is represented by the following formula (I-1i):

§-{{A-B-C(D)=N-N(E)-(P(=G))<}<sup>n</sup>[J-K-(Alk)<sub>a</sub>-N<[A<sub>2</sub>-P(=O)(OX)<sub>2</sub>]<sub>2</sub>]<sub>m</sub>}  
(I-1i)

in which:

§ represents a central core;

$\{\{A-B-C(D)=N-N(E)-(P(=G))<\}^n$  represents generation chains;

J-K-(Alk)<sub>a</sub>- represents an intermediate chain';

A represents an oxygen, sulfur or phosphorus atom or a radical -NR-;

B represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

C represents a carbon atom,

D and E, which are identical or different, each independently of the other represents a hydrogen atom, or an -Alkyl, -OAlkyl, -Aryl, or -Aralkyl radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

G represents a sulfur, oxygen, nitrogen, selenium or tellurium atom or a radical =NR;

N represents a nitrogen atom;

P represents a phosphorus atom;

R and R', which are identical or different, each independently of the other represents a hydrogen atom or an -Alkyl, -Aryl, or -Aralkyl radical;

J represents an oxygen atom, a sulfur atom or a radical -NR-;

K represents an -Aryl-, -Heteroaryl-, or -Alkyl- radical, each of which is optionally substituted by a Halogen atom or a -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -Alkyl, -Aryl, or -Aralkyl radical;

X represents an -alkyl or -Aryl radical, -H or /M<sup>+</sup>, where M is a cation,

the radicals A2, which are identical or different, each independently of the other represents a single bond or a linear or branched hydrocarbon chain having from 1 to 6 chain members, each of said chain members optionally being selected from a heteroatom, each chain member being optionally substituted by one or more substituents selected from -Alkyl, -Hal, -NO<sub>2</sub>, -NRR', -CN, -CF<sub>3</sub>, -OH, -OAlkyl, -Aryl, and -Aralkyl;

m represents an integer greater than or equal to 1;

n represents an integer from 0 to 12;

{<sup>n</sup>} denotes the branched structure of the generation n chains of said dendritic polymer, and

a represents 0 or 1.

121. (New) A method for preparing a dendritic polymer according to claim 108, comprising:

(i) reacting the corresponding dendritic polymer having a terminal function -CHO, -CH=NR, -NH<sub>2</sub> or -P(=G)Cl<sub>2</sub>

with a corresponding compound having one or two functionalities -PO<sub>3</sub>X<sub>2</sub>;

(ii) optionally followed, when X represents H or M, by a step which comprises converting the dendritic polymer obtained in (i) having a -PO<sub>3</sub>Me<sub>2</sub> termination into the corresponding dendritic polymer having an -A1<[A2-P(=O)(OH)<sub>2</sub>]<sub>2</sub> termination,

(iii) optionally followed, when X represents M, by a step which comprises converting the dendritic polymer obtained in (ii) having an -A1<[A2-P(=O)(OH)<sub>2</sub>]<sub>2</sub> termination into the salt of the corresponding dendritic polymer having an -A1<[A2-P(=O)(OM)<sub>2</sub>]<sub>2</sub> termination.

122. (New) A method for treating or being in contact with surfaces comprising using a dendritic polymer according to claim 108.